WHAT IS CLAIMED IS:

1. An image processing system comprising:

a buffer unit extracting nxm pixel matrix block data from image data, where n and m are integers;

a binarizing unit transforming the n x m pixel matrix block data into binary data represented by a maximum value and a minimum value;

differential data calculating unit calculating differential data which is a difference between a value of each pixel in the n x m pixel matrix block data and one of the maximum value and the minimum value of the binary data;

a sub-band transform unit transforming the differential data by a sub-band transform method so as to obtain a transform factor having a plurality of frequency components; and an encoding unit encoding the binary data and the sub-band transform factor so as, to obtain a code representing the image data.

- 2. The image processing system as claimed in claim 1, wherein said encoding unit deletes lower order bits of the sub-band transform factor so that the code has a predetermined fixed length.
- 3. The image processing system as claimed in claim 2, wherein said encoding unit deletes more lower order bits from the high-frequency component than the low-frequency component when both the maximum, value and the minimum value exist in the binary data of the same block data.

- 4. The image processing system as claimed in claim 1, wherein said encoding unit quantizes the high-frequency component of the sub-band transform factor by a vector quantizing method.
 - 5. An image processing method comprising the steps of:

extracting n x m pixel matrix block data from image data, where n and m are integers; transforming the n x m pixel matrix block data into binary data represented by a maximum value and a minimum value;

calculating differential data which is a difference between a value of each pixel in the n x m pixel matrix block data and one of the maximum value and the minimum value of the binary data;

transforming the differential data by a sub-band transform method so as to obtain a transform factor having a plurality of frequency components; and

encoding the binary data and the sub-band-transform factor so as to obtain a code representing the image data.

- 6. An image processing system comprising:
- a dividing unit dividing image data into a plurality of n x m pixel matrix block data, where n and m are integers;

a transform unit transforming each pixel in the n x m pixel matrix block data by a frequency transform method so as to produce a transform factor including a high-frequency component and a low-frequency component;

an image area discriminating unit for determining whether the block being processed corresponds to an edge area or a non-edge area based on the transform factor output from said transform unit;

a quantizing unit quantizing the transform factor for the edge area and the transform factor for the non-edge area by different methods; and

an encoding unit encoding an output of said quantizing unit by an entropy encoding method,

wherein a total of a number of bits of the high-frequency component and a number of bits of the low-frequency is the same regardless of types of the edge area or the non-edge area, and a number of bits of the high-frequency component for the edge area is the same as a number of bits of the low-frequency component of the non-edge area.

- 7. The image processing system as claimed in claim 6, wherein said encoding unit encodes error data generated by said quantizing unit.
- 8. The image processing system as claimed in claim 6, wherein an encoding of the image for the edge, area is performed by using, only the high-frequency component, and an encoding of the image for the non-edge area is performed by using only'the low-frequency component.
- 9. The image processing system as claimed in claim 6, wherein every other block data is used for restoring an original image.
 - 10. An image processing method comprising the steps of:

dividing image data into a plurality of n x m pixel matrix block data, where n and m are integers;

transforming each pixel in the n x m pixel matrix block data by a frequency transform method so as to produce a transform factor including a high-frequency component and a low-frequency component;

determining whether the block being processed corresponds to an edge area or a nonedge area based on the transform factor output from said transform unit;

quantizing the transform factor for the edge area and the transform factor for the nonedge area by different methods; and

encoding an output of said quantizing unit by an entropy encoding method,

wherein a total of a number of bits of the high-frequency component and a number of bits of the low-frequency is the same regardless of types of the edge area or the non-edge area, and a number of bits of the high-frequency component for the edge area is the same as a number of bits of the low-frequency component of the non-edge area.

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